

Wednesday, July 22, 2015 3:04:17 PM

Ship Thersday

Page 1

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 7/22/2015 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 7/23/2015 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: _____ **Process Plan:** CMC **Date:** 5-7-22 **Tooling:** _____

Date:

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr	
N/A	Rev E	7.A

100	Document Control	0.00		
100	DOCUMENT CONTROL		JUL 2 2019	DAS
DC	Memo	0.00		6
Doc.Control -USB or Paperwork	Photocopy bluefile and create labels per PPP D412-702-023 CHG003			9-89

110	Pick Kit	0.00	
110			JUL 22 2015 DAB 27
Packaging	Memo	0.00	(1) S A _____ 9-89
Packaging			

120	QC4- 100% Inspect kits for completeness	0.00	
120			
QC	Memo	0.00	
Quality Control			

JUL 23 2015

DAS
6
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																														
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Work Order ID 134853

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134853

Page 2

Item ID: D412-702-023

Accept

N900040100Setup Start ***NS1***

Revision ID:

Item Name: Shoulder Harness, 4 Point Attachment, 5 Man Fwd Facing

Stop ***NS2***Start Date: 7/22/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 7/23/2015 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Packaging	0.00							
130									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP D412-702-023								
	Location: <u>Ship</u>								
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									

JUL 23 2015

DAS
6
9:00

ML5

JUL 23 2015

MF 15-7-23

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

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134853

D412-702-023

Start Date: 7/22/2015**Required Date:** 7/23/2015

Start Qty: 1.00

Required Qty: 1.00

IPP Rev:C06.04.03As per DSI9324 JLM

IPP rev D 06.12.14 per ecn 871 EC

IPP Rev:E 07-03-14 As per DSI 9351 JLM

Rev.F 11.05.31 DSI 9559 EC verified by: JLM

IPP

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN4-13A *AN4-13A* Bolt		Purchased	No			120	Each	400.0000	4	4			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				FG		20							DAS 27 9-89
				122808		20							
				ST325A		296							
				m132551		296							
				ST344		84							
				m131957		84							
D3195-041 *D3195-041* Bracket		Manufactured	No			120	Each	5.0000	2	4			
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST021		5							DAS 27 9-89
				133451		5							
D3195-043 *D3195-043* Bracket		Manufactured	No			120	Each	6.0000	2	2		JUL 21 2015	DAS 27 9-89
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				ST025		6							
				118939		1							
				133450		5							

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Picklist Print

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Page 2

Work Order ID: 134853

134853

Parent Item: D412-702-023

D412-702-023

Parent Item Name: Shoulder Harness,4 Point Attachment,5 Man Fwd Facing

Start Date: 7/22/2015

Required Date: 7/23/2015

Start Qty: 1.00

Required Qty: 1.00

D3196-1
D3196-1

Bar

DAS
6
9-89

Manufactured No

120 Each

2.0000

1
JL

DAS
27
9-89

Location

Loc Qty

Loc Code

ST256

2

119624

2

120

Each

4.0000

1
JA

DAS
27
9-89

D3197-041

D3197-041

Bar

DAS
6
9-89

Manufactured No

Location

Loc Qty

Loc Code

ST256

4

119324

4

120

Each

9.0000

2
JA

DAS
27
9-89

D3268-1

D3268-1

Placard

DAS
6
9-89

Manufactured No

Location

Loc Qty

Loc Code

ST028

9

132242

9

120

Each

32.0000

2
JA

DAS
27
9-89

D3546-1

D3546-1

Clip

DAS
6
9-89

Manufactured No

Location

Loc Qty

Loc Code

ST051A

32

118984

22

127598

10

2
JA

JUL 24 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Picklist Print

Wednesday, July 22, 2015 3:04:16 PM

Page.3

Work Order ID: 134853

134853

Parent Item: D412-702-023

D412-702-023

Parent Item Name: Shoulder Harness, 4 Point Attachment, 5 Man Fwd Facing

Start Date: 7/22/2015

Required Date: 7/23/2015

Start Qty: 1.00

Required Qty: 1.00

D3551-11

Manufactured No

120 Each

32.0000

5

D3551-11

Hook And Loop Tie

DAS
6
9-89

**

JA

DAS
27
9-89

Location

Loc Qty

Loc Code

ST416

32

120143

5

121427

27

D412-702-069

Manufactured No

120 Each

16.0000

1

D412-702-069

Grommet

DAS
6
9-89

**

JA

DAS
27
9-89

Location

Loc Qty

Loc Code

PKg015a

16

118834

5

121269

11

D4387-041

Manufactured No

4.0000

5

D4387-041

Harness Assy

DAS
6
9-89

**

JA

DAS
27
9-89

Location

Loc Qty

Loc Code

ST467

4

121404

4

MS24694-S152

Purchased No

120 Each

32.0000

2

MS24694-S152

Screw

DAS
6
9-89

**

JA

DAS
27
9-89

Location

Loc Qty

Loc Code

ST287

32

m130238

32

1116

2

Missing
IX
will ship other shoulder harness not with customer
50122414

sent with 50122573 MF 15-8-5
1 X 134285

JUL 24 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Picklist Print

Wednesday, July 22, 2015 3:04:16 PM

Page 4

Work Order ID: 134853

134853

Parent Item: D412-702-023

D412-702-023

Parent Item Name: Shoulder Harness,4 Point Attachment,5 Man Fwd Facing

Start Date: 7/22/2015

Required Date: 7/23/2015

Start Qty: 1.00

Required Qty: 1.00

MS24694-S154

Purchased

No

120

Each

57.0000

2

2

JUL 21 2015

MS24694-S154

JA

Screw

DAS

27

9-89

DAS
6
9-89

Location

Loc Qty

Loc Code

ST287

57

m129198

7

m131618

50

2

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____							
Misidentified ☐	☐ Past Due								

QTY -021	QTY -023	QTY -025	QTY -027	QTY -029	QTY -035	Part Number	Description
X						D412-702-021	Dart 13-Man Shoulder Harness Kit, 4-point
	X					D412-702-023	Dart 5-Man Forward Facing Shoulder Harness Kit, 4-point
		X				D412-702-025	Dart 4-Man Aft Facing Shoulder Harness Kit, 4-point
			X			D412-702-027	Dart 4-Man Side Facing Shoulder Harness Kit, 4-point
				X		D412-702-029	Dart 1-Man Forward Facing Shoulder Harness Kit, 4-point
					X	D214-702-035	Dart 5-Man Aft Facing Shoulder Harness Kit, 4-point, for Bell 214B/B-1
1			1	1		D412-702-069	GROMMET KIT
2	2					D3195-041	BRACKET
2	2					D3195-043	BRACKET
1	1			1		D3196-1	BAR
1			1			D3196-3	BAR
1			1			D3196-4	BAR
2	2					D3197-041	BAR
4		4				D3198-1	FITTING
2	2					D3268-1	PLACARD
9	5		4	1		D3446-041	HARNESS ASSEMBLY, 4 POINT
4		4				D3446-043	HARNESS ASSEMBLY, 4 POINT
					5	D3446-045	HARNESS ASSEMBLY, 4 POINT
13	5	4	4	1	5	D3551-11	HOOK AND LOOP TIE
2	2					D3546-1	CLIP
4		4				AN4-5A	BOLT
4	4					AN4-13A	BOLT
8		8				AN4-20A	BOLT
20		20				AN960JD416	WASHER (OR NAS1149D0463J)
12		12				MS21042L4	NUT (OR MS21042-4)
8	2		6	2		MS24694-S152	SCREW
8	2		6	2		MS24694-S154	SCREW

QTY -069	Part Number	Description
X	D412-702-069	GROMMET KIT
24	D3619-2	GROMMET
1	D3619-2T1	HOLE PUNCH
1	D3619-2T2	STRIKER BLOCK
1	D3619-2T3	PUNCH
1	D3619-2T4	DIE

DART SERVICE INSTRUCTION

TO AMEND IIN-D412-702-1 REV. A,
AND ICA-D412-702 REV. 4 OR EARLIER APPROVED REVISIONS
REF. TCCA STC: SH04-7
REF. FAA STC: SR01997NY
REF. EASA STC: EASA.IM.R.S.00710

PURPOSE

The purpose of this DSI is to outline the replacement of existing D3446-041/-043 Shoulder Harnesses with the new and improved D4387-041/-043 Shoulder Harnesses.

CHANGE

For the following Kits, the D4387-041 and D4387-043 Shoulder Harnesses respectively replace the D3446-041 and D3446-043 Shoulder Harnesses as follows:

Old Harness P/N	Used On	New Harness P/N	Effectivity
D3446-041	D412-702-021	D412-702-021 D412-702-023 D412-702-027 D412-702-029 D4387-041	CHG 003 and subsequent
	D412-702-023		CHG 002 and subsequent
	D412-702-027		
	D412-702-029		
D3446-043	D412-702-021	D4387-043	CHG 003 and subsequent
	D412-702-025		CHG 002 and subsequent

Customers who want to upgrade their shoulder harnesses may replace their existing D3446-041/-043 with D4387-041/-043 per this service instruction.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 11.05.09
CERT. NO.: SH04-7
ISSUE NO.: 3

A	NEW ISSUE	MB	11.05.09
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9559	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		HARNESS CHANGE	NTS
DATE	11.05.09	COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	